

# Choosing to become a general practitioner – What attracts and what deters? An analysis of German medical graduates' motives

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## ABSTRACT

**Background:** To be able to counter the increasing shortage of general practitioners (GPs) in many countries, it is crucial to remain up-to-date with the decisive reasons why young physicians choose or reject a career in this field. **Materials and Methods:** Qualitative content analysis was performed using data from a cross-sectional survey among German medical graduates ( $n = 659$ , response rate = 64.2%). Subsequently, descriptive statistics was calculated. **Results:** The most frequent motives to have opted for a GP career were ( $n = 74/81$ ): Desire for variety and change (62.2%), interest in a long-term bio-psycho-social treatment of patients (52.7%), desire for independence and self-determination (44.6%), positively perceived work-life balance (27.0%), interest in contents of the field (12.2%), and reluctance to work in a hospital (12.2%). The most frequent motives to have dismissed the seriously considered idea of becoming a GP were ( $n = 207/578$ ): Reluctance to establish a practice or perceived associated risks and impairments (33.8%), stronger preference for another field (19.3%), perception of workload being too heavy or an unfavorable work-life balance (15.0%), perception of too low or inadequate earning opportunities (14.0%), perception of the GP as a “distributor station” with limited diagnostic and therapeutic facilities (11.6%), perception of too limited specialization or limited options for further sub-specialization (10.6%), rejection of (psycho-) social aspects and demands in general practice (9.7%), and perceived monotony (9.7%). **Conclusion:** While some motives appear to be hard to influence, others reveal starting points to counter the GP shortage, in particular, with regard to working conditions, the further academic establishment, and the external presentation of the specialty.

**Keywords:** Career choice, family medicine, general practice, physician shortage, primary care, public health

## Introduction

There is an increasing shortage of general practitioners (GPs) in both Germany and many other Western countries due to recruitment problems and demographic change.<sup>[1-3]</sup> The German Advisory Council on the Assessment of Developments in the Health Care System, an Expert Committee appointed by the Federal Ministry of Health, expects that by 2025 there will

be a cumulated national replacement demand of approximately 20,000 GPs.<sup>[4]</sup> In Germany, the GP is a medical specialist, and the duration of study and training to become a GP is equal to other medical specialties. It comprises the successful completion of undergraduate medical education (6 years at university) and subsequently a 5-year (full-time) GP residency, closing with a final specialist examination. German GPs usually work office-based as primary care providers in an outpatient setting. They are typically the first contact for most types of health problems, both in the cities as well as in the rural areas. To identify the

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starting points to counter the recruitment problems in general practice, an understanding of young physicians' motives with regard to specialty choice is necessary. Although there has been substantial international research in this field, there is a need for current studies to remain up-to-date with this dynamically changing topic (e.g., due to changes regarding the gender ratio of the medical student population [in Germany, the proportion of female medical students has continuously increased], different job opportunities and working conditions than in former times, changed values and attitudes of the young generation of physicians, etc.). In addition to well-designed quantitative analyses based on the findings of previous research, qualitative studies are suitable and needed to reveal new or changed motives.<sup>[5]</sup> Many previous qualitative studies concentrated particularly on the reasons of medical students or residents who have opted for a GP career.<sup>[6-8]</sup> Only very few previous qualitative studies also focused on the decisive reasons of young physicians who seriously considered, but finally dismissed the idea of becoming a GP.<sup>[9]</sup> However, this information, in particular, might reveal possible ways to remove or reduce important barriers.

As a complement to our previously published results of a quantitative study on the influences on medical graduates' career choices,<sup>[10,11]</sup> the present qualitative analysis examined the decisive reasons of current German medical graduates who (a) have finally opted for a GP career or (b) have finally dismissed the seriously considered idea to do so.

## Materials and Methods

### Sampling, design, and questionnaire

The present analysis is based on qualitative data from a cross-sectional medical graduate survey conducted at the Leipzig Medical School, Germany. In addition to a larger number of quantitative items addressing sociodemographic aspects, career development and plans, as well as factors consistently shown to be associated with GP career choice in previous studies, the questionnaire used contained two open-ended questions enquiring into the participants' motives regarding their actual career choice and, if ever considered, their motives to opt against a career in general practice. The exact wording of these two questions was: "Which reasons were decisive with regard to the choice of your current (aspired) specialty?" and "If you have ever considered becoming a GP, but finally decided not to do so: What were the decisive reasons?" In both cases, the participants could write down their answers in a free-text box. The number of decisive reasons was not limited. Detailed information regarding sampling, design, and questionnaire has been published elsewhere.<sup>[10,11]</sup>

### Data analysis

The participants' written explanations formed the database for the present analysis. Raw data were analyzed following the approach of qualitative content analysis by Mayring.<sup>[12]</sup> Categories were developed inductively by two scientists (a psychologist and an

economist, both working in academic general practice and familiar with the topic of career choice), at first independently from each other. As selection criterion for categorization, every written statement that can stand alone as a decisive reason was defined. Subsequently, the resulting category systems were compared, differences were discussed, and consensus was found. To be able to assess the reliability of the results, another rater (general practice resident, representative of the target group) was asked to assign the raw data to the final category system. Applicable categories were assigned only once per person. Agreement was calculated in percent and Cohen's kappa was calculated as a measure for interrater reliability. Finally, the categories were added as binary variables to the original dataset and absolute and relative frequencies were calculated using IBM® SPSS® Statistics Version 20.0 (Armonk, NY: IBM Corp.). To facilitate the communicability of the results, categories with related content were also summarized into aggregated motives on a higher abstraction level.

### Ethics

Our investigation was conducted in accordance with the Declaration of Helsinki. According to the regulations of the Ethics Committee of the Leipzig Medical School, an explicit ethical approval was deemed unnecessary.

## Results

### Sample characteristics

The response rate of the graduate survey was 64.2% (659/1027). A nonresponder analysis revealed no significant bias except for a slightly higher proportion of female participants. At the time of participation, 76.0% (501/659) had completed their licensing examination whereas others were close to their graduation. The majority of the participants were female (66.9% [441/659]) and mean age was  $27.9 \pm 2.5$  years. While 35.4% (231/653) had mainly grown up in a big city, 37.7% (246/653) came from small towns and 27.0% (176/653) from rural areas. A majority of 70.4% (463/658) declared being in a relationship and 19.3% (127/658) stated that they had children. Out of the 659 participants, 81 participants (12.3%) had opted to become GPs.<sup>[10,11]</sup> Additional information on the conducted nonresponder analysis as well as further statistics have been published previously.<sup>[10,11]</sup>

### Decisive reasons "pro" general practice

Out of the 81 persons who had opted for a career in general practice, 74 (91.4%) answered the open-ended question regarding the decisive reasons for their choice. Within the respective material, altogether 204 statements were reduced to 28 single motives. The agreement between the raters was 92.2% and the interrater reliability was very high with  $\kappa = 0.91$  (Cohen's kappa). The absolute and relative frequencies of the single and the aggregated motives to opt for a career in general practice are presented in detail in Table 1. For aggregated motives, frequencies were additionally provided separately for males and females. A quick overview of the most frequent motives to decide on a GP career found in this study is given in Figure 1.



**Table 2: Frequencies of the participants' decisive reasons "contra" general practice\***

Single motives (paraphrased close to the text, =coding scheme)	Frequency n (%)**	Aggregated motives (by content)	Frequency n (%)**	Male n (%)	Female n (%)
Reluctance to work as self-employed/to establish a practice - generally or for specific reasons	32 (15.4)	Reluctance to establish a practice or perceived risks and impairments associated with the establishment of a practice	70 (33.8)	20 (28.2)	50 (36.8)
Perceived impairment of the daily work as a physician by restrictions of external institutions (health insurance companies, Association of Statutory Health Insurance Physicians ...)	34 (16.4)				
Perceived excessive bureaucracy	36 (17.4)				
Stronger preference for another specialty	20 (9.7)	Stronger preference for another field or specialty	40 (19.3)	18 (25.4)	22 (16.2)
Desire to perform surgery (and perception of no or limited such opportunities in general practice)	21 (10.1)				
Perception of too heavy workload	18 (8.7)	Perception of too heavy workload or an unfavorable work-life balance	31 (15.0)	10 (14.1)	21 (15.4)
Perception of an unfavorable work-life balance	14 (6.8)				
Perception of too low earning opportunities in general practice in general	20 (9.7)	Perception of too low or inadequate earning opportunities	29 (14.0)	10 (14.1)	19 (14.0)
Perception of an inadequate relationship between effort and remuneration (cost-benefit ratio)	7 (3.4)				
Too low income during general practice residency	3 (1.4)				
Perceived reduction of a GP's work to a distributive function in the health care system (referral to "real" specialists)	22 (10.6)	Perception of the GP as a "transit station"/"distributor station" with limited diagnostic and therapeutic facilities	24 (11.6)	8 (11.3)	16 (11.8)
Perception of limited diagnostic facilities in general practice	5 (2.4)				
Perception of limited therapeutic facilities in general practice	4 (1.9)				
Perception of limited professional development opportunities or options for further subspecialization after the completion of the specialist exam	2 (1.0)	Perception of too limited specialization or limited options for further subspecialization	22 (10.6)	8 (11.3)	14 (10.3)
Perception of too limited specialization within the field or desire for stronger specialization	21 (10.1)				
Aversion to perceived traits of patients in general practice (talkative, complaining, demanding, noncompliant, ...)	9 (4.3)	Rejection of (psycho-) social aspects and demands in general practice or of the special GP-patient relationship	20 (9.7)	6 (8.5)	14 (10.3)
Reluctance to be faced with (too much) psychosocial/family-centered tasks	8 (3.9)				
Reluctance to have too close/intensive doctor-patient relationships	4 (1.9)				
Perceived monotony of the work in general practice (in particular monotonous reasons for encounter)	20 (9.7)	Perceived monotony	20 (9.7)	7 (9.9)	13 (9.6)
Perception of a poor image of general practice (press, society, university, colleagues, ...)	8 (3.9)	"Image problem" – perception of GPs as moderately competent occupational group with comparably low reputation	16 (7.7)	6 (8.5)	10 (7.4)
Disdain of the professional competence of GPs	7 (3.4)				
Personal experience with GPs who were perceived as incompetent	1 (0.5)				
Reluctance to treat too many old patients, patients with chronic diseases, and dying patients	13 (6.3)	Reluctance to be faced with too many geriatric patients and tasks	14 (6.8)	2 (2.8)	12 (8.8)
Reluctance to make home visits	2 (1.0)				
Problems with content and/or structure of the general practice residency	11 (5.3)	Problems with the general practice residency	11 (5.3)	4 (5.6)	7 (5.1)
Bad experience in university (teaching, clerkships, both in general practice and in other specialties (e.g. "GP bashing"))	10 (4.8)	less frequently mentioned motives (<5%) which cannot be summarized			
Reluctance to work in a rural area (and perceived necessity as a GP)	7 (3.4)				
Concern to have too short (possible) consultation times	7 (3.4)				
Aversion to contents of the field, not further specified	6 (2.9)				
Desire for teamwork and exchange with colleagues (vs. "lone fighter")	6 (2.9)				
Perception of overwhelmed or resigned and frustrated GPs	5 (2.4)				
Fear of excessive professional demand (mostly with regard to the necessarily broad qualifications)	5 (2.4)				
Perception of unfavorable conditions, not further specified	5 (2.4)				
Desire to work in a hospital (at least as an option)	4 (1.9)				
Perception that general practice is not a suitable entry into the medical profession	4 (1.9)				
Perception of a lack of opportunities for research in general practice	2 (1.0)				
Private, not generalizable motives	1 (0.5)				

\*Total n=207 graduates who dismissed the idea of a potential GP career (71 male, 136 female); sorted in descending order by frequency of mention of the aggregated motives; \*\*Applicable categories were assigned only once per person. Consequently, frequencies can be read as number of persons who made one or more statements that could be assigned to the respective motive category. GP: General practitioner

### Decisive reasons “contra” general practice

Out of the remaining 578 participants, 207 (35.8%) answered the open-ended question enquiring into decisive reasons with regard to a decision against a career in general practice, if ever considered. Within the respective material, altogether 439 statements were reduced to 37 single motives and two additional categories. The agreement between the raters was 90.2% and the interrater reliability was again very high with  $\kappa = 0.90$  (Cohen’s kappa). The absolute and relative frequencies of the single and the aggregated motives for deciding against a considered career in general practice are presented in detail in Table 2. For aggregated motives, frequencies were additionally provided separately for males and females. A quick overview of the most frequent motives to dismiss the seriously considered idea to become a GP found in this study is given in Figure 2. The two defined additional categories were called, “statements that cannot be interpreted (or at least not free of doubt)” ( $n = 14$ ) and “explicit statement that general practice is still a career option (subsequent switch)” ( $n = 21$ ).

### Discussion

This study examined the decisive reasons of German medical graduates to choose or reject a career in general practice. The presented results provide a weighted, comprehensive, and wide-ranging overview of current medical graduates’ motives at two different abstraction levels [Tables 1 and 2].

### Main findings in relation to other studies

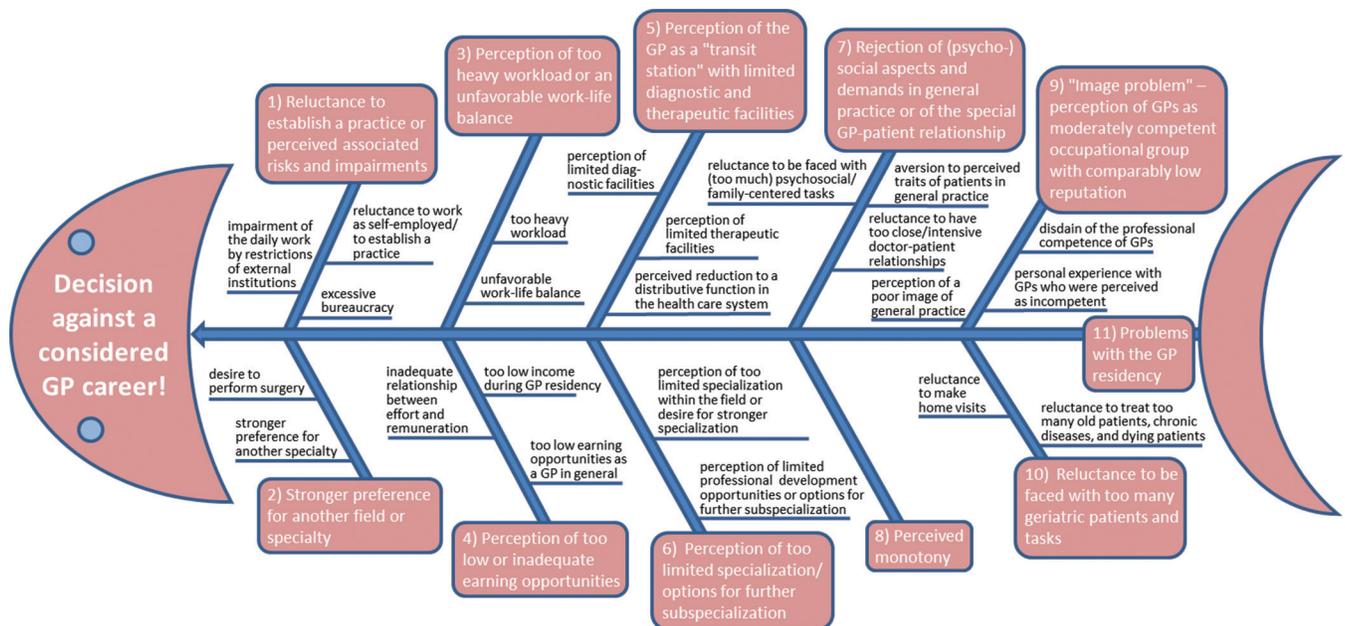
#### Decisive reasons “pro” general practice

The main motives to choose a career in general practice found in this study [Table 1] are supported by the results of previous studies among medical students committed to general practice,

medical graduates, GP trainees, and newly qualified GPs, both with regard to content and weighting.<sup>[5-8,13-15]</sup> Furthermore, the three most frequent aggregated motives to choose a GP career found in the present work are in line with the aspects working GPs value most about their work.<sup>[14]</sup> According to the results of Roos *et al.*, reluctance to work in a hospital might be a more frequent motive to choose a GP career in Germany than it is in other European countries.<sup>[5]</sup> In this study, possible gender differences regarding the frequency of certain motives were considered only at a descriptive level. However, our results imply that the desire for variety and change, the interest in a long-term bio-psycho-social treatment of patients, as well as a positively perceived work-life balance, are more frequent motives to choose a GP career among female graduates. Except for the desire for variety and change, this is in line with the results of previous studies which additionally reported the desire for autonomy and independence being a more frequent motive among male residents.<sup>[5,15]</sup>

#### Decisive reasons “contra” general practice

This study provides a weighted, comprehensive, and wide-ranging overview of current medical graduates’ decisive reasons to dismiss the seriously considered idea of a career in general practice [Table 2], although several single motives found in this study were also described by the authors of other studies.<sup>[6,9,13,14]</sup> It can be stated that one clear emphasis within the reasons to reject a GP career in our study is on the perceived working conditions of GPs including restrictions by external institutions, bureaucracy, reimbursement, and workload. The respective perceptions of the participating graduates are absolutely in line with those of working GPs and it has been reported that German GPs, in particular, have a very high workload (average weekly working time: 51 h; average patient contacts per week: 243) and less time for their patients (average time per patient contact:



**Figure 2:** Overview of the most frequent motives to dismiss the seriously considered idea to enter a general practitioner career found in this study (sorted by frequency of mention of the aggregated motives [compare Table 2])

7.8 min) compared to their international counterparts.<sup>[17,18]</sup> These results underline the necessity to alter the framework conditions of work in general practice to counter the current recruitment problems. Furthermore, a substantial number of motives seem to be based on perceptions that appear to be inaccurate or distorted. Consequently, steps should be undertaken to correct these misperceptions.<sup>[19]</sup> Regarding potential gender differences in motives to reject a GP career, our findings revealed no obvious relevant disparities on a descriptive level.

Out of the 207 participants who dismissed the seriously considered idea to enter a GP career in our study, 21 (10.1%) explicitly stated that general practice is still a career option. In Germany, it is possible to switch the chosen discipline during residency (thereby accepting a possibly increased duration of residency). It is also possible to switch the career in the future by getting another (second) specialization. However, this requires a further residency time. The duration of residency time after a career switch depends on the similarity of the curriculum of the respective specialties, for example, it takes more time for a neuro-surgeon to become a GP than for an internal medicine specialist. From our discussions with medical students, we already knew that there are a substantial number of graduates who are definitely interested in general practice, but enter internal medicine residencies in the first instance to keep several options open.

### Implications for practice

Basically, one can distinguish between motives that can hardly be influenced, such as personal preferences, and motives related to (mis-) perceptions or circumstances that might be promoted or altered. For example, it appears to be less promising to convince a person with a strong affinity for surgery to enter a specialty where such tasks play a minor role. However, it is certainly possible to combat frequent misperceptions and negative stereotypes regarding the GPs' work and competencies. Our results imply that improving the working conditions of GPs with regard to restrictions by external institutions, bureaucracy, reimbursement, and workload, as well as an improvement of the general practice residency time with regard to structure, content, support, and salaries, might substantially increase the attractiveness of the field. Promoting and communicating different working models in general practice (e.g., self-employed/employed, single practice/group practice/medical service centres, full-time/part-time) might also be helpful to make the field more attractive to medical graduates with different risk preferences and life plans. Misperceptions regarding the work and the professional opportunities and perspectives in general practice as well as regarding the GPs' specific competencies might be altered by a carefully targeted and self-confident external presentation of the specialty. A well-thought-out external presentation of general practice should further specifically emphasize all those characteristics of the field that attract medical students and graduates.

Consequently, institutions which are planning to raise the number of future GPs should take our results into account. First, medical schools play an important role as they considerably shape young

physicians' perceptions. The undergraduate general practice curriculum should emphasize the attractive characteristics of the specialty and specifically combat frequent misperceptions and negative stereotypes regarding a GP's work and the primary care sector. Furthermore, competent role models should highlight the specific competencies of GPs. In this regard, besides frontal teaching, community-based practical experiences are important as they open up the possibility to dispel stereotypes and to get an accurate view on general practice.<sup>[20-22]</sup> In general, the academic institutionalization of general practice should be promoted. In Germany, there are still faculties without a respective institute or chair.<sup>[23]</sup> Regarding Europe, despite general practice becoming increasingly established as an academic discipline, its integration into the undergraduate medical curriculum varies substantially and, in some European countries, it is still possible to graduate without having been exposed to any GP curriculum.<sup>[24]</sup> In addition to a sufficient academic presence, a respectful atmosphere with regard to general practice at medical schools is necessary as previous studies imply that also the "hidden curriculum" strongly influences medical students' beliefs and plans.<sup>[25,26]</sup> Finally, a stronger support of research in general practice would be desirable. GP lobby groups might play a further important role to counteract the increasing GP shortage, as they are able to support a positive external presentation of the field and to prepare and foster necessary changes on a political level. Policy-makers and statutory institutions involved in the shaping of physicians' working conditions (in Germany: Associations of Statutory Health Insurance Physicians [Kassenärztliche Vereinigung] and chambers of physicians [Ärzttekammern]) should make efforts to further improve the framework conditions of the general practice residency. They should also improve the conditions with regard to the establishment and management of a primary care practice, the promotion of alternative working models in general practice, and the earning possibilities of GPs. Last but not the least, the GPs themselves (especially those involved in undergraduate medical education) might help to attract more young physicians to general practice by representing the field in a self-confident manner, emphasizing the pleasant aspects of being a GP, and avoiding an excessive focus on current difficulties.

The implications for practice drawn from this study among medical graduates support and complement the conclusions drawn by the authors of previous qualitative studies among medical undergraduates and working GPs on the topic.<sup>[16,17,19]</sup> Furthermore, our results underpin current expert opinions on what is needed to strengthen primary health care.<sup>[27]</sup>

Finally, in this study, more than one-third of the participants who had opted for other specialties had obviously seriously considered a GP career at some time (35.8% answered the question for respective reasons), which is also a promising result. It implies that there are a substantial number of medical students who might be convinced regarding the value of a GP career if the right measures are taken.

### Strengths and limitations

The highly satisfactory response rate compared with similar surveys among medical graduates in Germany, the sample size,

and the thorough analysis of the material involving different raters are strengths of the present work. A possible limitation may be that not all of the participants had actually completed their licensing examination at the time of the graduate survey. However, the study design ensured that all those participants were at least close to graduation. As a second possible limitation, it should be stated that this study included graduates of only one medical school, which may limit the generalizability of the presented findings. As a third limitation, it could be argued that some of the motives found in this study might to some extent be specifically related to the German context. A fourth possible limitation is related to the process of summarizing the individual motives derived from the original text into aggregated motives on a higher abstraction level to facilitate the communicability of the results. Because of some overlaps in content, it is possible that other researchers might have summarized some of the motives in another way. However, due to the complete presentation of all individual motives on the lower abstraction level, transparency is ensured.

## Conclusion

This qualitative study provides a detailed and wide-ranging overview of current medical graduates' decisive reasons to choose or reject a career in general practice. Furthermore, the additional descriptive statistics allow an assessment of the weighting of the different motives. While some of the motives appear to be hard to influence, others reveal starting points for medical schools, GPs involved in undergraduate medical education, policy-makers, and statutory institutions as well as lobbying groups to counter the increasing shortage of GPs. Measures should be taken particularly with regard to the framework conditions of working as a GP, as well as the further academic establishment and the external presentation of the specialty.

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## Conflicts of interest

There are no conflicts of interest.

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